Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
		257/9.cclc.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 12:14
		257/p.cclc.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 12:14
		(257/9.ccls.).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/10/05 12:14
		schottky near10 ((emitter near base) or emitter/base or emitter) and collector near10 ((collector near base) or collector/base or collector)(and bjt and bipolar near junction near transistor and base and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 15:27
		schottky same emitter and tunnel\$3 same collector and spin and valve and transistor and	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:12
L1	42	spin-valve near transistor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:12
L2	141529	base and emitter and collector	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:13
L3	12842	ferromagnetic same base	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:13

Page 1

				•		
L4	1308	(schottky near diode) same (emitter same base)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:13
L5	242 ·	((tunnel\$3 near current) or (tunnel-effect)) same (collector same base)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:13
L6	1	I2 and I3 and I4 and I5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:14
L7	1	I1 and i4 and I5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:14
L8	16	I1 and I2 and I3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:41
L9	23747492	@ad<"20021213" @rlad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:15
L10	31174590	@pd<"20021124"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:15
L11	11	18 and 19	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:15

142		17 4 10	HC DOCK ID	00	ON:	2007/04/16 02 15
L12	0	17 and 19	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:15
L13	0	16 and 19	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:15
L14	. 334	257/474,e27.006.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2007/04/16 03:51
L15	1160	257/421,427,e29.042,e29.323.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:51
L16	0	l15l9	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:51
L17	706	I15 and I9	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:51
L18	. 14	l1 and l17	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/16 03:51
S1	5	(("60369820") or ("2003214004") or ("2003122208")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/04/26 16:23
S2	0	(("60369820") or ("2003214004") or ("2003122208")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/04/26 16:23

Page 3

S3	1	(("6069820") or ("2003214004") or ("2003122208")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/04/26 16:24
S4	1	("6069820").PN. or ((2003/214004) or (2003/122208)).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/04/26 16:24
S5	. 1	(("6069820") or ("2003214004") or ("2003122208")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/04/26 17:08
S6	1	(sato near rie).in. and "20031120". pd.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 17:08
S7	3	(("6069820") or ("20030214004") or ("20030122208")).PN.	US-PGPUB; USPAT; USOCR	OR .	OFF	2006/04/26 17:15
S8	. 1	("20020000575").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/04/26 17:13
S9	1	("2002/0000575").URPN.	USPAT	OR	ON	2006/04/26 17:13
S10	26	(rie near sato).in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 18:01
S11	758	(spin near valve or (spin-valve)) and transistor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR ·	ON	2006/04/26 18:01
S12	101	(spin near valve or (spin-valve)) and transistor and emitter and collector and base	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON .	2006/04/26 18:02
S13	8	(spin near valve or (spin-valve)) and transistor and emitter and collector and base and schottky near diode and tunnel and effect and barrier	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 18:18

S14	· 33	(spin near valve or (spin-valve)) and transistor and emitter and collector and base and schottky and tunnel and effect and barrier	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 18:59
S15	10	"6501143"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 19:12
S16	21	"5973334"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 19:54
S17	9	"5973334" and schottky and tunnel	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 19:56
S18	25	schottky near10 ((emitter near base) or emitter/base) and tunnel	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 19:57
S19	393	schottky near10 ((emitter nearbase) or emitter/base)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 19:57
S20	347	schottky near10 ((emitter near base) or emitter/base) and collector	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 19:57
S21	215	schottky near5 ((emitter near base) or emitter/base) and collector	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 19:57

4/16/2007 3:53:53 AM Page C:\Documents and Settings\bliu2\My Documents\EAST\Workspaces\High performance spin-valve transistor 10538923.wsp Page 5

S22	28	schottky near ((emitter near base) or emitter/base) and collector	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 15:25
S23	0	("2006/0049474").URPN.	USPAT	OR	ON	2006/04/26 20:40
S24	1	schottky near ((emitter near base) or emitter/base) and tunnel\$3 near collector and spin and valve and transistor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/26 20:43
S25	. 12	schottky same emitter and tunnel\$3 same collector and spin and valve and transistor and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON 	2006/04/27 12:55
S26	18	tunnel\$3 same collector and spin and valve and transistor and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 12:55
S27	17	tunnel\$3 same collector and spin and valve and transistor and @ad<"20021213" and emitter and base	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2006/04/27 13:03
S28	2	("6919608").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/04/27 13:03
S29	2	(jinbo near mutsuko).in. and spin	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 13:20
S30	34	parkin.in. and spin near valve	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 15:19

4/16/2007 3:53:53 AM
C:\Documents and Settings\bliu2\My Documents\EAST\Workspaces\High performance spin-valve transistor 10538923.wsp Page 6

S31	2	tunnel\$3 near emitter and spin near valve near transistor and schottky near collector and base	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 15:21
S32	13	tunnel\$3 and emitter and ((spin near valve) or spin-valve) near transistor and schottky and collector and base and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2006/04/27 15:23
S33	11	schottky near10 ((emitter near base) or emitter/base or emitter) and collector near10 ((collector near base) or collector/base or collector) and bjt and bipolar near junction near transistor and base and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 15:27
S34	0	schottky near10 ((emitter near base) or emitter/base or emitter) and tunnel\$3 near10 ((collector near base) or collector/base or collector) and bjt and bipolar near junction near transistor and base and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 15:27
S35	0	schottky same ((emitter near base) or emitter/base or emitter) and tunnel\$3 same ((collector near base) or collector/base or collector) and bjt and bipolar near junction near transistor and base and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ÖR	ON	2006/04/27 15:28
S36	0	schottky same emitter and tunnel\$3 same collector and bjt and bipolar near junction near transistor and base and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 15:29
S37	1	schottky same emitter and tunnel\$3 same collector and bjt and base and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 17:05
S38	6	emitter with collector with (switching switch switched reverse reversed reversing) with "skill"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2006/04/27 15:35

		EAST Scare	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
S39	8	schottky near barrier and emitter and tunneling near barrier and collector and transistor and bipolar and junction and (insulator insulation) and base and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 17:25
S40	3	"5371378" and skills	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 17:31
S41	. 0	"5371378" and skill same ordinary same art same emitter same collector	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 17:32
S42	1	"5371378" and skill same emitter same collector	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 18:17
S43	3087	360/324.1,324.11,324.12,324.2. ccls. or 257/423,427,421,e29.042, e29.167,e29.006,e29.179,e29.241, e29.323.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 18:18
S44	1750	360/324.1,324.11,324.12,324.2. ccls. or 257/423,427,421,e29.042, e29.167,e29.006,e29.179,e29.241, e29.323.ccls. and (spin-valve or spin near valve) near transistor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 18:19
S45	1745	360/324.1,324.11,324.12,324.2. ccls. or 257/423,427,421,e29.042, e29.167,e29.006,e29.179,e29.241, e29.323.ccls. and (spin-valve or spin near valve) near transistor and collector and base and emitter and schottky and tunnel\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	.2006/04/27 18:19
S46	1739	360/324.1,324.11,324.12,324.2. ccls. or 257/423,427,421,e29.042, e29.167,e29.006,e29.179,e29.241, e29.323.ccls. and (spin-valve or spin near valve) near transistor and collector and base and emitter and schottky and tunnel\$3 and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 18:20

S47	1739	360/324.1,324.11,324.12,324.2. ccls. or 257/423,427,421,e29.042, e29.167,e29.006,e29.179,e29.241, e29.323.ccls. and ((spin-valve) or (spin near valve)) near transistor and collector and base and emitter and schottky and tunnel\$3 and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2006/04/27 18:20
548	9	(360/324.1,324.11,324.12,324.2. ccls. or 257/423,427,421,e29.042, e29.167,e29.006,e29.179,e29.241, e29.323.ccls.) and ((spin-valve) or (spin near valve)) near transistor and collector and base and emitter and schottky and tunnel\$3 and @ad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/04/27 18:20
S49	1411	emitter same base same (schottky near (diode or junction))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 11:50
S50	16720	collector same base same (dielectric or insulat\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 11:51
S51	59103	"I2" and "I3"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 11:51
S52	229	S49 and S50	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 11:51
S53	43	S52 and tunnel\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR ·	ON	2006/10/05 11:51

4/16/2007 3:53:53 AM Page 9

S54	10	S52 and ferromagnetic	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 11:51
S55	469059	"257"/\$.ccls. "360"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 11:52
S56	1818	257/38,47,421,474,479,e27.006, e29.185.ccls. "360324"".1.""324"". ""2,314".ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 11:52
S57	2877	257/38,47,421,474,479,e27.006, e29.185.ccls. 360/324.1,324.2,314. ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 11:53
S58	23663652	@ad<"20021213" @rlad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 11:53
S59	198	S58 and S52	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 11:55
S60	2	("20060049474").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/10/05 12:13
S61	270	257/9.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 12:24

Page 10 4/16/2007 3:53:53 AM
C:\Documents and Settings\bliu2\My Documents\EAST\Workspaces\High performance spin-valve transistor 10538923.wsp

662		200/224 1 224 2 244	LIC DOSLID	0.0	ON	2006/10/05 12:24
S62	644	360/324.1,324.3,314.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR·	ON	2006/10/05 12:24
S63	548	360/324.1,324.3,314.ccls. and (spin near valve spin-valve)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 12:24
S64	548	360/324.1,324.3,314.ccls. and (spin near valve spin-valve) and S55	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 12:25
S65	410	360/324.1,324.3,314.ccls. and (spin near valve spin-valve) and S58	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 12:26
S66	1	360/324.1,324.3,314.ccls. and (spin near valve spin-valve) and S58 and S49 and S50	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 12:49
S67	29	"257474"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 12:49
S68	76	257/474	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 12:49
S69	28	257/479	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/05 12:49

Page 11 4/16/2007 3:53:53 AM Page C:\Documents and Settings\bliu2\My Documents\EAST\Workspaces\High performance spin-valve transistor 10538923.wsp

S70	2	"5747859".pn.	US-PGPUB;	OR	ON	2006/10/13 21:04
			USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB			
S71	81739	"5747859".pn. and tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2006/10/13 21:05
S72	0	"5747859".pn. and (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:40
S73	0	"5747859".pn. and tantalum	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:06
S74	0	"5747859".pn. and zinc	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:06
S75	0	"5747859".pn. and zirconium	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:06
S76	0	"5747859".pn. and yttrium	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:06
S77	1	"5747859".pn. and oxide	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:06

Page 12 4/16/2007 3:53:53 AM
C:\Documents and Settings\bliu2\My Documents\EAST\Workspaces\High performance spin-valve transistor 10538923.wsp

S78	6	(US-20050024788-\$).did. or (US-6069820-\$ or US-6963121-\$ or US-6473275-\$ or US-6611405-\$ or	US-PGPUB; USPAT	OR	ON	2006/10/13 21:40
S79	0	US-6501143-\$).did. S78 and (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:41
S80	. 1	spin-valve near transistor and (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:41
S81	0	transistor and (tunnel tunneling) and shottky near diode and (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:42
S82	939132	transistor (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:42
S83	8798	transistor and (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:42
S84	123	schottky near diode and transistor and (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2006/10/13 21:43
S85	28	schottky near diode and transistor and (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide) and tunnel	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:45

Page 13 4/16/2007 3:53:53 AM Page C:\Documents and Settings\bliu2\My Documents\EAST\Workspaces\High performance spin-valve transistor 10538923.wsp

Γ			T	·		
S86	23666642	@ad<"20021213" @rlad<"20021213"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:43
S87	22	S86 and S85	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:45
S88	2	("5640343").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/10/13 21:45
S89		S88 and (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide) and tunnel	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:45
S90	0	S88 and (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:46
S91	0	S88 and (tantalum zinc zirconium yttrium)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON .	2006/10/13 21:46
S92	9431	(insulator insulation insulating) same (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:46
S93	168	(insulator insulation insulating) same (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide) same (tunneling tunnel tunnel-effect) and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:47

		•				
S94	23	(insulator insulation insulating) same (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide) same (tunneling tunnel tunnel-effect) and S86 and emitter	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:48
S95	· 7	(insulator insulation insulating) same (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide) same (tunneling tunnel tunnel-effect) and S86 and emitter and collector and base	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 21:49
S96	1	(insulator insulation insulating) same (tantalum near oxide or zinc near sulfide or zirconium near oxide or rare near earth near oxide or yttrium near oxide) same (tunneling tunnel tunnel-effect) and S86 and emitter and collector and base and schottky	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 22:41
S97	713	metallic near collector	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 22:41
S98		metallic near collector and schottky diode and (tunnel tunneling) and barrier and (spin adj valve adj transistor)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 22:42
S99	21	metallic near collector and schottky diode and (tunnel tunneling) and barrier and (spin adj valve adj transistor) and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 22:53
S10 0	4257	metallic with collector and schottky diode and (tunnel tunneling) and barrier and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 22:54

Page 15 4/16/2007 3:53:53 AM Page C:\Documents and Settings\bliu2\My Documents\EAST\Workspaces\High performance spin-valve transistor 10538923.wsp

S10 1	4901	(metallic metal) with collector and schottky diode and (tunnel tunneling) and barrier and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 22:54
S10 2	1444	(metallic metal) with collector and schottky diode and (tunnel tunneling) and barrier and S86 and transistor and emitter and base	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2006/10/13 22:56
S10 3	1020	(metallic metal) with collector and schottky diode and (tunnel tunneling) and barrier and S86 and transistor and emitter and base and spin	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 22:56
S10 4		(metallic metal) with collector and schottky near diode and (tunnel tunneling) and barrier and S86 and transistor and emitter and base and spin	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 23:03
S10 5	4	(metallic metal) with collector and schottky near diode and (tunnel tunneling) and barrier and S86 and transistor and emitter and base and spin and (insulation insulator dielectric)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 23:03
S10 6	4	(metallic metal) with collector and schottky near diode and (tunnel tunneling) and barrier and S86 and transistor and emitter and base and spin and (insulation insulator dielectric insulating)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 23:14
S10 7	104	(metallic metal) same collector and schottky and (tunnel tunneling) and barrier and S86 and transistor and emitter and base and (insulation insulator dielectric insulating)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 23:14
S10 8	131	(metallic metal) same collector and schottky and (tunnel tunneling) and S86 and transistor and emitter and base and (insulation insulator dielectric insulating)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR ·	ON	2006/10/13 23:46

4/16/2007 3:53:53 AM Page C:\Documents and Settings\bliu2\My Documents\EAST\Workspaces\High performance spin-valve transistor 10538923.wsp Page 16

S10 9	11	("20030122208" "20030214004" "5 371378" "5747859" "6069820").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/10/13 23:46
S11 0	_ 5	("20030122208" "20030214004" "5 371378" "5747859" "6069820").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/10/13 23:48
S11 1	953	emitter and collector and base and schottky and (insulating insulator insulation dielectric) and electrode and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/10/14 00:00
S11 2	70	emitter same collector same base same schottky same (insulating insulator insulation dielectric) same electrode and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/10/14 00:03
S11 3	2	emitter same collector same base same schottky same (insulating insulator insulation dielectric) with (tunnel tunneling) same electrode and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR .	ON	2006/10/14 00:03
S11 4	2	emitter same collector same base with schottky same (insulating insulator insulation dielectric) with (tunnel tunneling) same electrode and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/10/14 00:08
S11 5	5	emitter same collector same base with schottky same (tunnel tunneling) same electrode and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/10/14 00:08
S11 6	13301313	emitter same collector same base with schottky same (tunnel tunneling) S86	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/10/14 00:08
S11 7	13301301	emitter same collector same base with schottky same (insulation insulator insulating) with (tunnel tunneling) S86	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/10/14 00:11

4/16/2007 3:53:53 AM Page 17

				,		
S11 8		emitter same collector same base with schottky same (insulation insulator insulating) with (tunnel tunneling) and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/10/14 00:15
S11 9	1381	emitter same collector same base and schottky and (insulation insulator insulating dielectric) and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/10/14 00:16
S12 0	91	emitter same collector same base and schottky and (insulation insulator insulating dielectric) and (electrode contact) near top and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR .	ON	2006/10/14 00:33
S12 1	2	("20020121647").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/10/14 00:24
S12 2	20	emitter same collector same base and schottky and (insulation insulator insulating dielectric) and (electrode contact) near top and S86 and spin	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/10/14 00:35
S12 3		"20020121647".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR -	ON	2006/10/14 00:35

Page 18 4/16/2007 3:53:53 AM Page C:\Documents and Settings\bliu2\My Documents\EAST\Workspaces\High performance spin-valve transistor 10538923.wsp